

IN THE CLAIMS

Please change the heading on page 12 before the claims as follows:

What is claimed is:~~Patent Claims~~

1. (Currently amended) A method for monitoring a transmission of data packets between at least two network subscribers, comprising:

~~with~~ safety-based monitoring of an error-based limit value, which is and/or can be predetermined, being carried out on ~~at the~~ transmission medium for response to identified incorrectly transmitted data packets ~~(1)~~ and identified correctly transmitted data packets ~~(1)~~;

transmitting a data record within a payload data in each data packet;

wherein, ~~characterized by a data record (22, 23) each data record~~ which is in each case expected by at least one network subscriber and ~~which is used to determine whether the data packets (1) have been transmitted incorrectly or correctly is transmitted within the payload data (2) in each data packet (1).~~

2. (Currently amended) The method as claimed in claim 1, further comprising ~~wherein evaluating an evaluation of~~ identified incorrect data packets ~~(1)~~ and identified elying correct data packets ~~(1)~~ ~~is carried out~~ in each definable time interval.

3. (Currently amended) The method as claimed in claim 1 ~~or 2, further comprising forming wherein a~~ the ratio of identified incorrect data packets ~~(1)~~ to identified correct data packets ~~(1)~~ is formed.

4. (Currently amended) The method as claimed in claim 1, ~~2 or 3~~, wherein address records ~~(22)~~ and/or check records ~~(23)~~ are used as the expected data records ~~(22, 23)~~.

5. (Currently amended) The method as claimed in claim 1 ~~one of the preceding claims~~, wherein the monitoring is carried out on the basis of a discrete transmission channel without any memory by means of a functional relationship, which is based on a Bernoulli distribution, between the probability of receiving an incorrect data record of a specific length and a maximum error rate which can be predetermined.

6. (Currently amended) The method as claimed in claim 1 ~~one of the preceding claims~~, wherein the error-based limit value is defined as a the product of an error rate, which is or can be predetermined, and a the number of bits within the expected data record ~~is defined as the error-based limit value~~.

7. (Currently amended) The method as claimed in claim 1 ~~one of the preceding claims~~, wherein the monitoring is performed by at least one slave subscriber and/or at least one master subscriber.

8. (Currently amended) The method as claimed in claim 1~~the preceding claim~~, wherein, in order to carry out the monitoring process, information is transmitted about identified incorrect and/or correct data packets from ~~the~~ ~~in each case~~ at least one waiting subscriber to at least one monitoring subscriber.

9. (Currently amended) An apparatus for monitoring a transmission of data packets between at least two network subscribers, comprising

means for safety-based monitoring of an error-based limit value, which can be and/or is predetermined, for response to identified incorrectly transmitted data packets ~~(1)~~ and identified correctly transmitted data packets ~~(1)~~, characterized by; and

means for determining incorrectly and correctly transmitted data packets ~~(1)~~ on the basis of an expected data record ~~(22, 23)~~ which is embedded within a~~the~~ payload data ~~(2)~~ of each data packet ~~(1)~~.

10. (Currently amended) The apparatus as claimed in claim 9, wherein the means for safety-based monitoring is~~are~~ designed to carry out an evaluation of identified incorrect data packets ~~(1)~~ and identified correct data packets ~~(1)~~ in each definable time interval, ~~and/or to form the ratio of identified incorrect data packets (1) to identified correct data packets (1).~~

11. (Currently amended) The apparatus as claimed in claim 9 ~~or 10~~, wherein the means for determination responds to address records ~~(22)~~ and/or ~~check records (23).~~

12. (Currently amended) The apparatus as claimed in claim
~~9~~~~one of claims 9 to 11~~, wherein the monitoring means is~~are~~
designed for a discrete transmission channel without any
memory, and, based on a Bernoulli distribution, form a
functional relationship between the probability of
receiving an incorrect data record of a specific length and
a maximum error rate which can be predetermined.

13. (Currently amended) The apparatus as claimed in claim
~~9~~~~one of claims 9 to 12~~, wherein the error-based limit value
is defined as ~~a~~~~the~~ product of an error rate, which is or
can be predetermined, and ~~a~~~~the~~ length of the expected data
~~record is defined as the error-based limit value.~~

14. (Currently amended) The apparatus as claimed in claim
~~9~~~~one of claims 9 to 13~~, wherein the means for determination
is~~are~~ associated with slave subscribers, and the means for
monitoring is~~are~~ associated with at least one slave
subscriber and/or one master subscriber.

15. (Currently amended) The apparatus as claimed in claim
~~9~~~~one of claims 9 to 14~~, ~~wherein~~~~characterized in that~~ the
means for determination is~~are~~ associated with network
subscribers, which are designed to transmit appropriate
information to at least one monitoring subscriber in
response to identified incorrect and/or correct data
packets.

16. (Currently amended) A network having an apparatus as
claimed in ~~one of claims 9 to 15~~.

17. (Currently amended) The network as claimed in claim 16, further comprising at least one bus system ~~that~~which is in the form of a ring, line, star ~~and/or~~ tree.

18. (Currently amended) The use of a network as claimed in claim 16~~claim 16 or 17~~ further comprising a function selected from the group consisting of: for building control technology, for the process industry, for the manufacturing industry, for passenger transport ~~and/or~~ for operation of an automation system.

19. (New) The apparatus as claimed in claim 9, wherein the means for safety-based monitoring is designed to form the ratio of identified incorrect data packets to identified correct data packets.

20. (New) The apparatus as claimed in claim 9, wherein the means for determination responds to check records.

21. (New) The apparatus as claimed in claim 9, wherein the means for determination is associated with slave subscribers, and the means for monitoring is associated with at least one master subscriber.